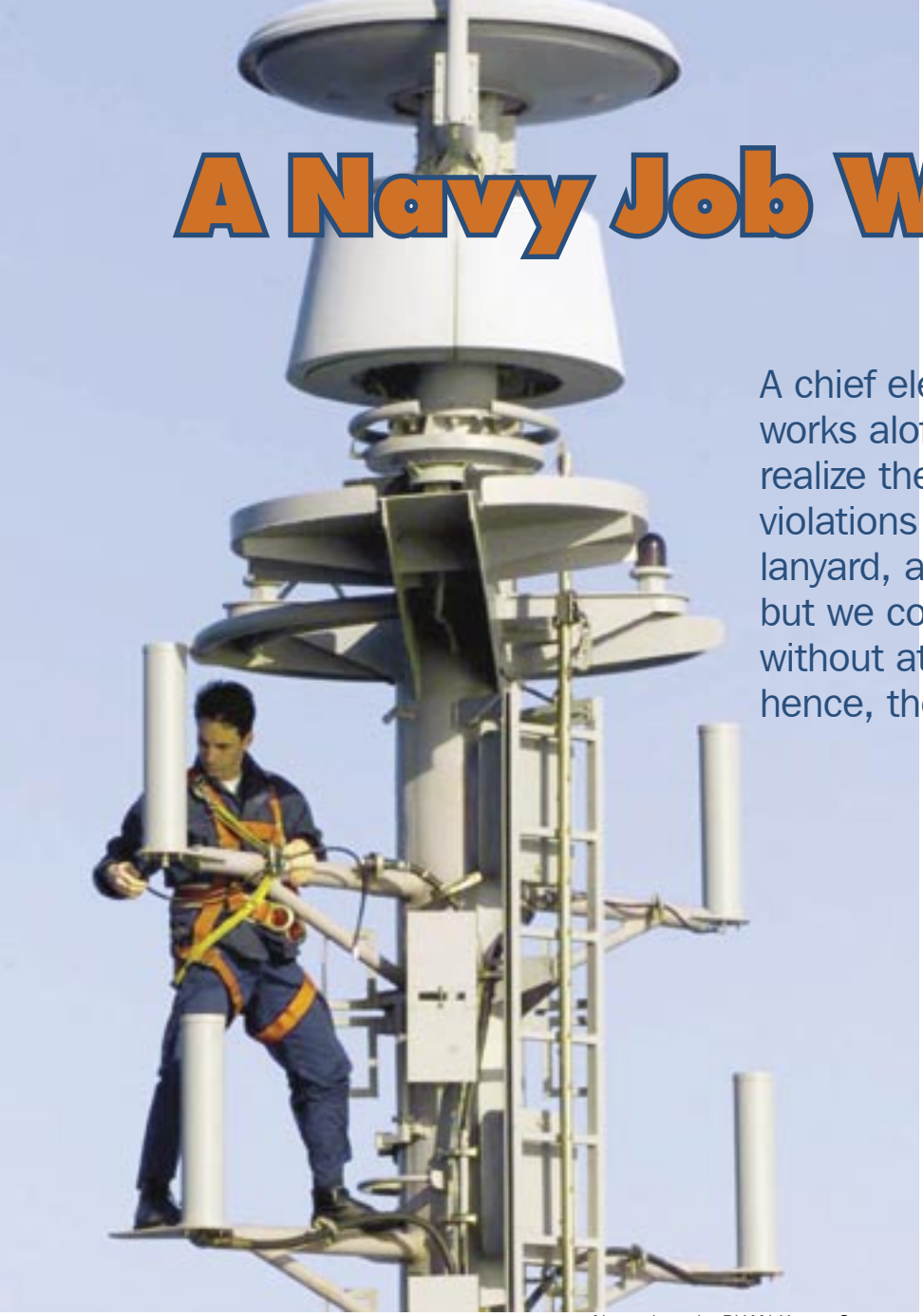
# A Navy Job With a View.



Navy photo by PHAN Kenny Swartout

A chief electronics technician (left) works aloft on radar equipment. We realize there are a couple of safety violations (e.g., he has no working lanyard, and the leg straps are loose), but we couldn't find a single photo without at least some violations—hence, the reason for this story.

By LCdr. Joe Mayers, USN (Ret.)

Two hundred feet is a long way to fall—a real long way. At that height, most people are frightened, panicky shells of their normal selves. Nevertheless, that's the average height above water a Sailor climbs when working aloft.

Some would say it's a good thing the Navy is filled with daring young Sailors who laugh in the face of the average person's fears. But few who have to work aloft laugh about it; in most cases, they take this work very seriously. As one young Sailor remarked, "It's my job, so I keep telling myself it's something I have to do, and it'll be over soon... oh, and I try not to look down."

Sailors often have to work aloft, and there's nothing routine about the evolution. That's why everyone involved with such operations always should have their what-if mindset of operational risk management (ORM) fully engaged.

The precautions and procedures outlined in paragraphs C0802 and C0804 of the Safety and Occupational Health Program Manual for Forces Afloat (OpNavInst 5100.19E) say not to go aloft on masts, stacks or kingposts without first obtaining written permission from the officer of the deck (OOD). Getting this permission involves completing a Working Aloft Checksheet (part of OpNavInst 5100.19E). Available at *http://www.safetycenter.navy.mil/instructions/OSH/5100-19E/OPNAV_form_5100_23.pdf*, this checksheet ensures workers follow the precautions and procedures for working aloft.

Supervisors and those concerned with working aloft should become familiar with this checksheet and all the procedures contained in Chapter C8 of OpNavInst 5100.19E. Among these procedures is the requirement to have a completely dressed-out safety observer (with full-body harness, sleeve, working and safety lanyards) stationed on deck.

The cognizant division-training plans must include regularly scheduled training on this material,

# ... And Its Share of Risks

and OODs should review the material periodically. It is recommended that ships include this material in the OOD required-reading folder.

Harnesses, climber sleeves, and lanyards used for working aloft are better controlled and issued from a single point on board. Harnesses and climber sleeves also can be serialized to facilitate documentation of accomplished planned maintenance (PMS) and inventory.

Equipment to be worked on and all rotating equipment in the aloft area must be danger-tagged out, according to OpNavInst 5100.19E's Working Aloft Checksheet. Hazardous transmitting equipment near the aloft working area must be secured with hanging placards to prevent transmission while personnel are aloft. The latest NavSea (Naval Sea Systems Command) NSWCCD (Naval Surface Warfare Center, Carderock Division) radhaz (hazards from electromagnetic radiation) survey should be used to design a tagout matrix.

One problem we often find during safety surveys is poorly maintained climber-safety rails *(references: GSS/GSO 622, NavShips Drawing 804-4563125 Rev C, MIP 6231/002).* To pass our scrutiny, rails should be free of all paint and corrosion and have a "light" coating of machine oil to help prevent corrosion. It's also important to ensure all climber-safety rails on a ship are on an equipment guide list (EGL) and are maintained according to PMS specifications. Too often, we find that rails on masts are in good condition, while those on stacks, kingposts and cranes are in very poor shape because no one has taken ownership.

The hole at the top of a rail is for a retaining pin to prevent the climber-safety sleeve from inadvertently coming off. Ensure the pin is there, and replace it after each use.

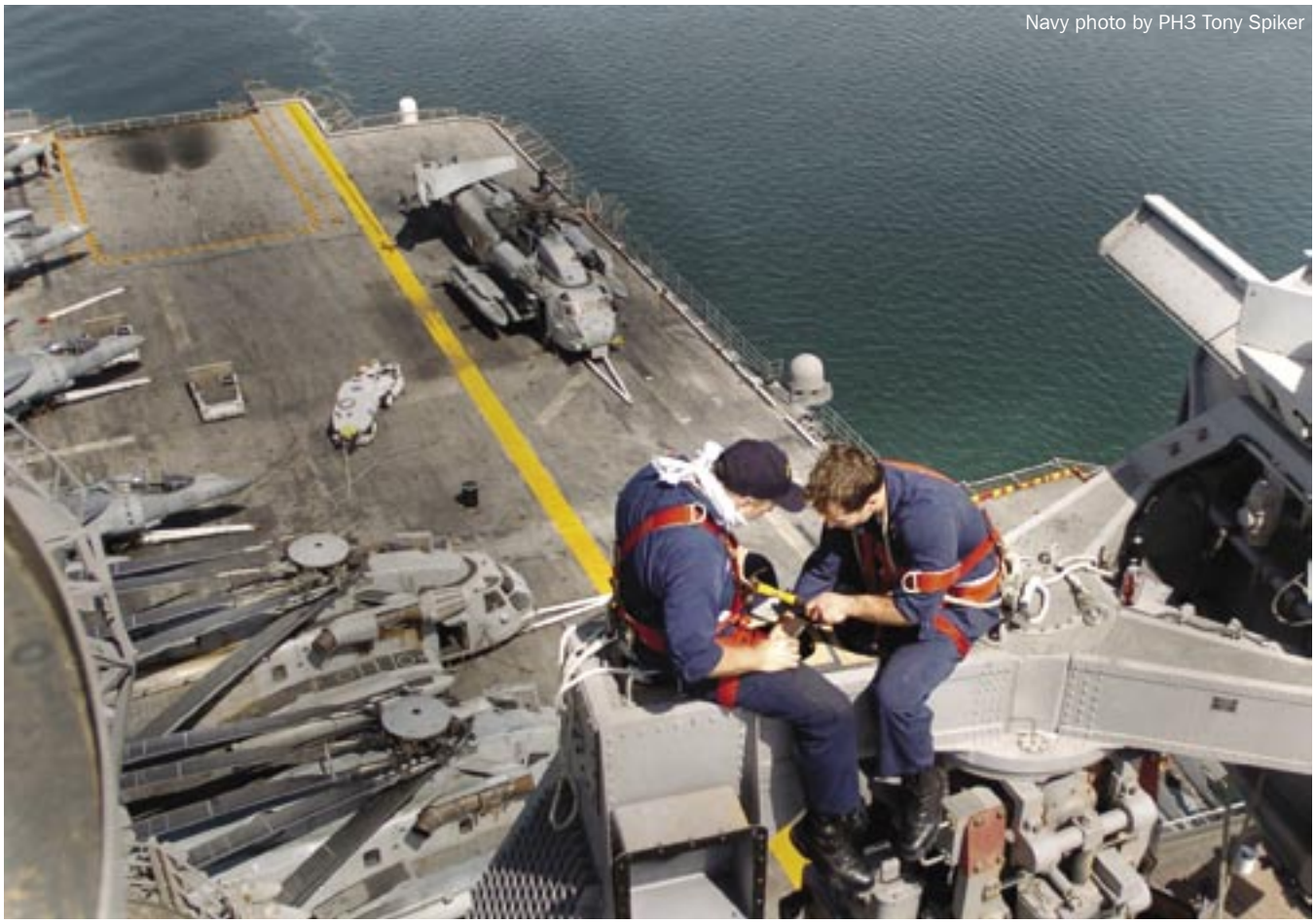
I strongly encourage electronics material officers (EMOs), communications officers (CommOs), electronics officers (ElecOs), chief electronics technicians (ETCs), chief information systems technicians (ITCs), chief fire controlmen (FCCs), and chief cryptologic technicians technical (CTTCs) to get up the mast periodically. Check your respective areas (e.g., navigation lighting, radar and antenna material condition, antenna weatherproofing, grounding-bonding, condition of nonskid, preservation, climber-safety rails, ladders, antenna cutout-switch condition and labeling, cable standoffs, and life rails/ropes). Don't forget to inspect the safety sleeves, harnesses, and working and safety lanyards before use, in accordance with established PMS. The lanyard length shall not exceed six feet or the distance from the work to six feet above the deck, whichever is shorter.

Both ship's force and outside-activity personnel should not violate aloft/radhaz procedures by disregarding warning signs and personnel barriers.

The combat systems officer of the watch (CSOOW) should not rely on e-mail to notify applicable leadership and workcenters of systems radiating status—we have seen that problem before. Don't assume that communications and coordination among all applicable ship's force workcenters, CSOOW, and OOD have taken place or still is in effect. Cognizant supervisors and leadership must verify aloft and radiation status. All affected personnel, including the OOD, CSOOW, engineering officer of the watch (EOOW), and appropriate department leadership's maintenance personnel, must have situational awareness for the scope of all topside aloft work or radiation status before, during and after aloft work has been completed.

The OOD, combat systems officer (CSO), engineer officer (EO), systems test officer (STO), EMO, CSOOW, and EOOW all must adhere to and enforce established aloft/radiation-zone safety procedures. That's the only way to keep aloft work safe and prevent mishaps among personnel from both ship's force and outside activities. We also reiterate targeted training for CSOs, operations officers (OpsOs), EMOs, STOs, CSOOWs, and cognizant systems personnel during our safety surveys.

As a former InSurv inspector, I'm amazed at some of the things found aloft that have gone unidentified, unreported and/or not acted upon by responsible divisions or departments. The communications, combat systems, operations, and engineering departments


Navy photo by PH3 Tony Spiker

Two electronics technicians third class work aloft on radars. Unfortunately, like the other photo, this one also has its share of safety violations (e.g., ball caps are a no-no in this situation, the hammer and all tools need to be tied off, the Sailor on the right has a line run around his neck and his shoulder strap has slid out of position, neither Sailor appears to have a safety lanyard, and the soda can behind the Sailor on the right could become a drop hazard).

have something installed topside in an aloft zone. It's essential that leadership and maintenance technicians in these departments have the training and awareness for finding all the related personnel and equipment hazards.

*At the time the author wrote this story, he was assigned to the Afloat Safety Programs Directorate at the Naval Safety Center.*

*The opening for this article was adapted from a July 2004* All Hands *article entitled "Overcoming Fears Aloft," by Charles L. Ludwig.*

*If you would like to see a safety brief that hits all the most important aspects of working aloft, you can't do much better than the one that follows. The combat systems maintenance officer aboard USS* George Washington *(CVN-73) gave the author a copy, which he used as an example of "how it should be done" during safety-survey visits to the fleet. As noted by the author, "With some minor modifications, you, too, can have a standardized safety brief available for your ship's aloft personnel at the harness-issue point."—Ed.*

**Resources:**

- http://safetycenter.navy.mil/afloat/surface/downloads/workingaloft.doc *[working aloft instruction, based on DDG platform]*
- http://safetycenter.navy.mil/acquisition/fall/ *[Acquisition Safety Fall Protection]*
- http://safetycenter.navy.mil/orm/checklists/afloat/ENCLOS4A.DOC *[USS Arkansas Sample ORM Work Permits]*